3.2.2 Upper Potomac Group Summary

3.2.2.1 Nichol Run Watershed

Description. Nichol Run Watershed is a medium sized watershed, with just under 14 miles of stream assessed. It is located in the very northern end of the County. The watershed is contained entirely within the county boundaries, and drains directly to the Potomac River.

Habitat. The habitat assessment results for Nichol Run Watershed are summarized by stream in Table 3-9. Habitat scores for each reach are depicted in Figure 3-10. Based on a length weighted habitat score of 127 (Table 3-2), Nichol Run Watershed is one of the highest quality watersheds in the County. Approximately 2 miles of stream were categorized as having "poor" habitat conditions, 4 miles as "fair," and 5 miles as "good" and 2 miles as "excellent."

CEM. Based on the CEM evaluations, 91 percent of the channels in Nichol Run Watershed are in Evolutionary Stage 3 (Table 3-3). Figure 3-11 summarizes the CEM results for Nichol Run Watershed.

Infrastructure. The infrastructure inventory resulted in 113 inventory points. The most significant problems were related to two head cuts and one obstruction which were each given an impact score of 10. The infrastructure inventory results are summarized in Table 3-10. Figures 3-12, 3-13, 3-14, 3-15, and 3-16 summarize impact scores for the erosion problems; deficient buffers; pipes/ditches; crossings; and dumps, obstructions, and utilities, respectively.

3.2.2.2 Pond Branch Watershed

Description. Pond Branch Watershed is a medium sized watershed, with approximately 17 miles of stream assessed. It consists of several small stream networks that drain directly to the Potomac at the northern end of the County.

Habitat. The habitat assessment results for Pond Branch Watershed are summarized by stream in Table 3-11. Habitat scores for each reach are depicted in Figure 3-10. Based on a length weighted habitat score of 99 (Table 3-2), Pond Branch Watershed is in the lower middle range of quality, compared to the rest of the County. Approximately 2 miles of stream were categorized as having "very poor" habitat conditions, 6 miles as "poor," 5.5 miles as "fair," and 4 miles as "good" and 0 miles as "excellent."

CEM. On the basis of the CEM evaluations all of the channels in Pond Branch Watershed are in Evolutionary Stage 3 (Table 3-3). Figure 3-11 summarizes the CEM results for Pond Branch Watershed.

Infrastructure. The infrastructure inventory resulted in 143 inventory points. The most significant problems were related to a head cut that was given an impact score of 10 and a deficient buffer and obstruction, which were given impact scores of 9. The infrastructure inventory results are summarized in Table 3-12. Figures 3-12, 3-13, 3-14, 3-15, and 3-16 summarize impact scores for the erosion problems; deficient buffers; pipes/ditches; crossings; and dumps, obstructions, and utilities, respectively.

TABLE 3-9
Habitat Assessment Summary for Nichol Run Watershed
Fairfax County Stream Physical Assessment

	Linear Feet (Percent) of Stream					
Stream	**Very Poor**	**Poor**	**Fair**	**Good**	**Excellent**	**Total**
Harkney Branch	0 (0.00)	0 (0.00)	5,316 (100.00)	0 (0.00)	0 (0.00)	5,316
Jefferson Branch	0 (0.00)	0 (0.00)	5,753 (25.83)	9,421 (42.29)	7,102 (31.88)	22,275
Nichols Run	0 (0.00)	0 (0.00)	1,971 (7.43)	19,715 (74.34)	4,835 (18.23)	26,520
Tributary to Jefferson Branch	0 (0.00)	0 (0.00)	1,648 (100.00)	0 (0.00%	0 (0.00)	1,648
Tributary to Nichols Run	549 (3.30)	10,199 (61.25)	5,904 (35.45)	0 (0.00)	0 (0.00)	16,652
Watershed Total	**549 (0.76)**	**10,199 (14.09)**	**20,592 (28.44)**	**29,136 (40.24)**	**11,936 (16.48)**	**72,412**

TABLE 3-10
Infrastructure Assessment Summary for Nichol Run Watershed
Fairfax County Stream Physical Assessment

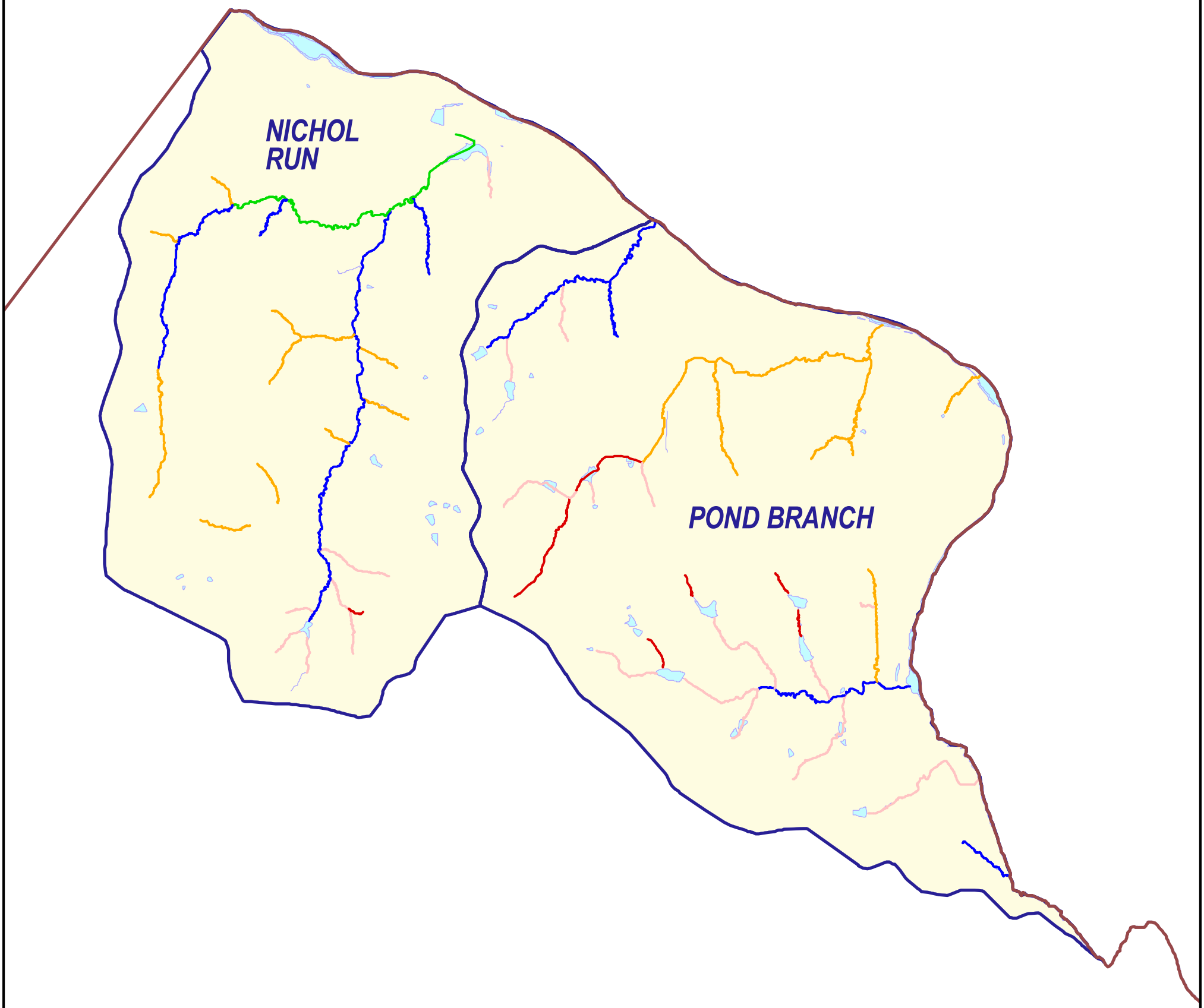
Impact Score	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**>10**	**Total**
Deficient Buffers	0	0	8	2	1	19	0	7	0	0	0	N/A	37
Crossings	16	5	15	0	0	4	1	1	0	0	0	N/A	42
Ditches and Pipes	4	0	3	0	0	1	0	0	0	0	0	N/A	8
Erosion	0	0	0	0	0	1	1	3	0	0	0	N/A	5
Head Cut	0	0	0	0	0	2	0	0	0	0	2	N/A	4
Obstruction	1	0	3	7	1	2	0	0	1	0	1	N/A	16
Utility	0	0	1	0	0	0	0	0	0	0	0	0	1
Total	**21**	**5**	**30**	**9**	**2**	**29**	**2**	**11**	**1**	**0**	**3**	**0**	**113**

TABLE 3-11
Habitat Assessment Summary for Pond Branch Watershed
Fairfax County Stream Physical Assessment

	Linear Feet (Percent) of Stream					
Stream	**Very Poor**	**Poor**	**Fair**	**Good**	**Excellent**	**Total**
Clarks Branch	6,577 (20.23)	5,112 (15.7)	20,824 (64.05)	0 (0.00)	0 (0.00)	32,513
Mine Run Branch	2,772 (11.60)	14,511 (60.73)	0 (0.00)	6,612 (27.67)	0 (0.00)	23,895
Tributary to Clarks Branch	0 (0.00)	0 (0.00)	1,722 (100.00)	0 (0.00)	0 (0.00)	1,722
Tributary to Mine Branch	766 (10.37)	2,446 (33.11)	4,175 (56.52)	0 (0.00)	0 (0.00)	7,387
Tributary to Pond Branch	0 (0.00)	3,528 (22.96)	0 (0.00)	11,839 (77.04)	0 (0.00)	15,368
Tributary to Potomac River	0 (0.00)	4,962 (55.12)	1,979 (21.99)	2,060 (22.89)	0 (0.00)	9,001
Watershed Total	10,115 (11.25)	10,115 (11.25)	28,700 (31.93)	20,511 (22.82)	0 (0.00)	89,885

TABLE 3-12
Infrastructure Assessment Summary for Pond Branch Watershed
Fairfax County Stream Physical Assessment

Impact Score	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**>10**	**Total**
Deficient Buffers	0	0	2	18	11	10	1	5	0	1	0	N/A	48
Crossings	67	1	0	4	0	0	2	2	0	0	0	N/A	76
Ditches and Pipes	8	0	0	0	0	1	0	0	0	0	0	N/A	9
Erosion	0	0	0	0	0	1	1	0	0	0	0	N/A	2
Head Cut	0	0	0	0	0	1	0	0	0	0	1	N/A	2
Obstruction	0	0	2	2	0	0	0	0	0	1	0	N/A	5
Utility	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	**75**	**1**	**4**	**24**	**12**	**13**	**4**	**7**	**0**	**2**	**1**	**0**	**143**



Fairfax County Boundary

Habitat Rating

- Excellent
- Good
- Fair
- Poor
- Very Poor
- No Habitat Assessment
- Lakes and Ponds
- Watersheds

WATERSHED GROUP:
UPPER POTOMAC

N

0 2000 4000 6000 8000 Feet

Figure 3-10
Habitat Assessment
Upper Potomac Group
Fairfax County Stream Physical Assessment

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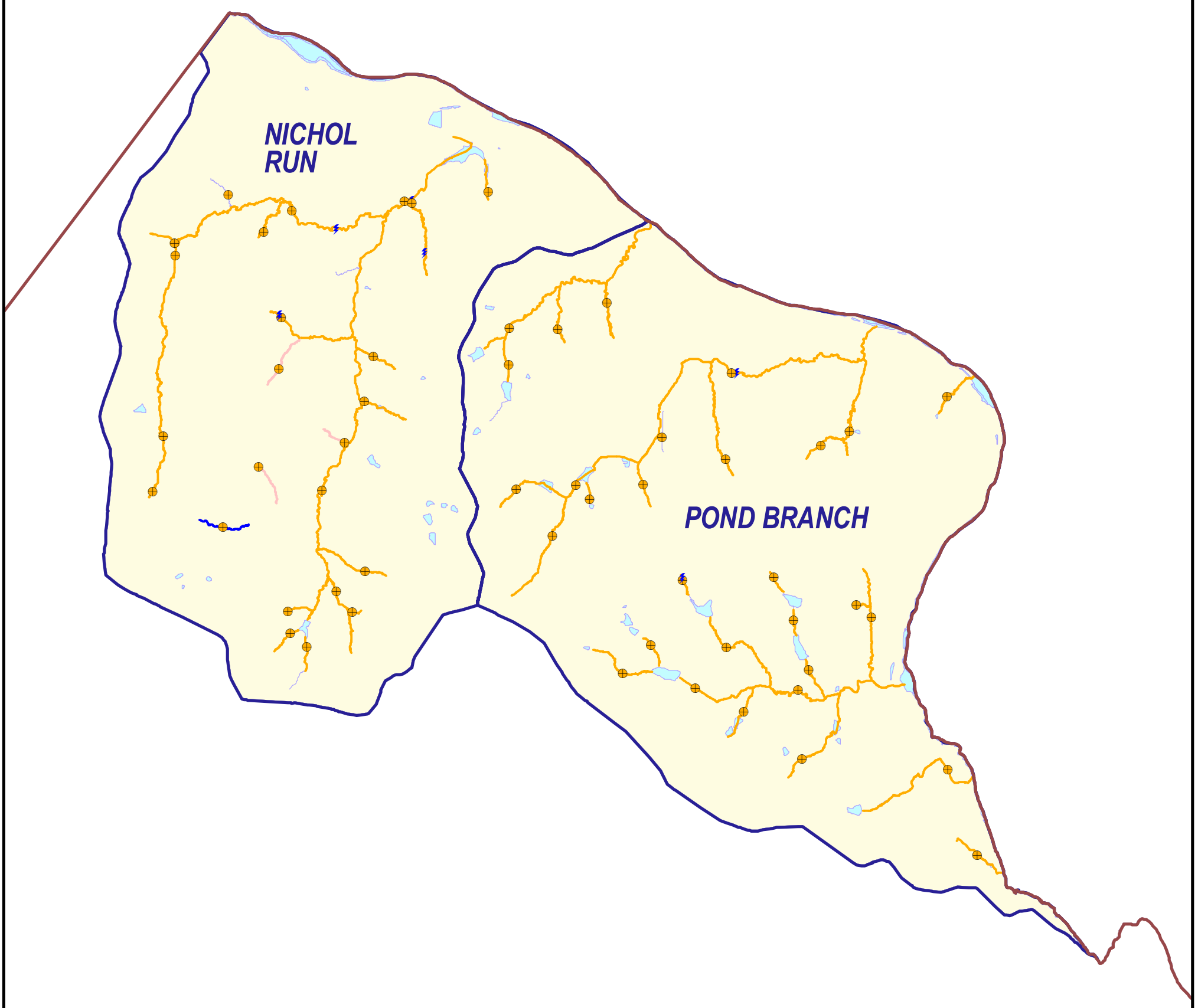

Inventory Types
- Cross Section
- Head Cut

CEM Stage
- Not Assigned
- 1
- 2
- 3
- 4
- 5
- Fairfax County Boundary
- Lakes and Ponds
- Streams
- Watersheds

WATERSHED GROUP:
UPPER POTOMAC

N

0 2000 4000 6000 8000 Feet

Figure 3-11
CEM Stages
Upper Potomac Group
Fairfax County Stream Physical Assessment

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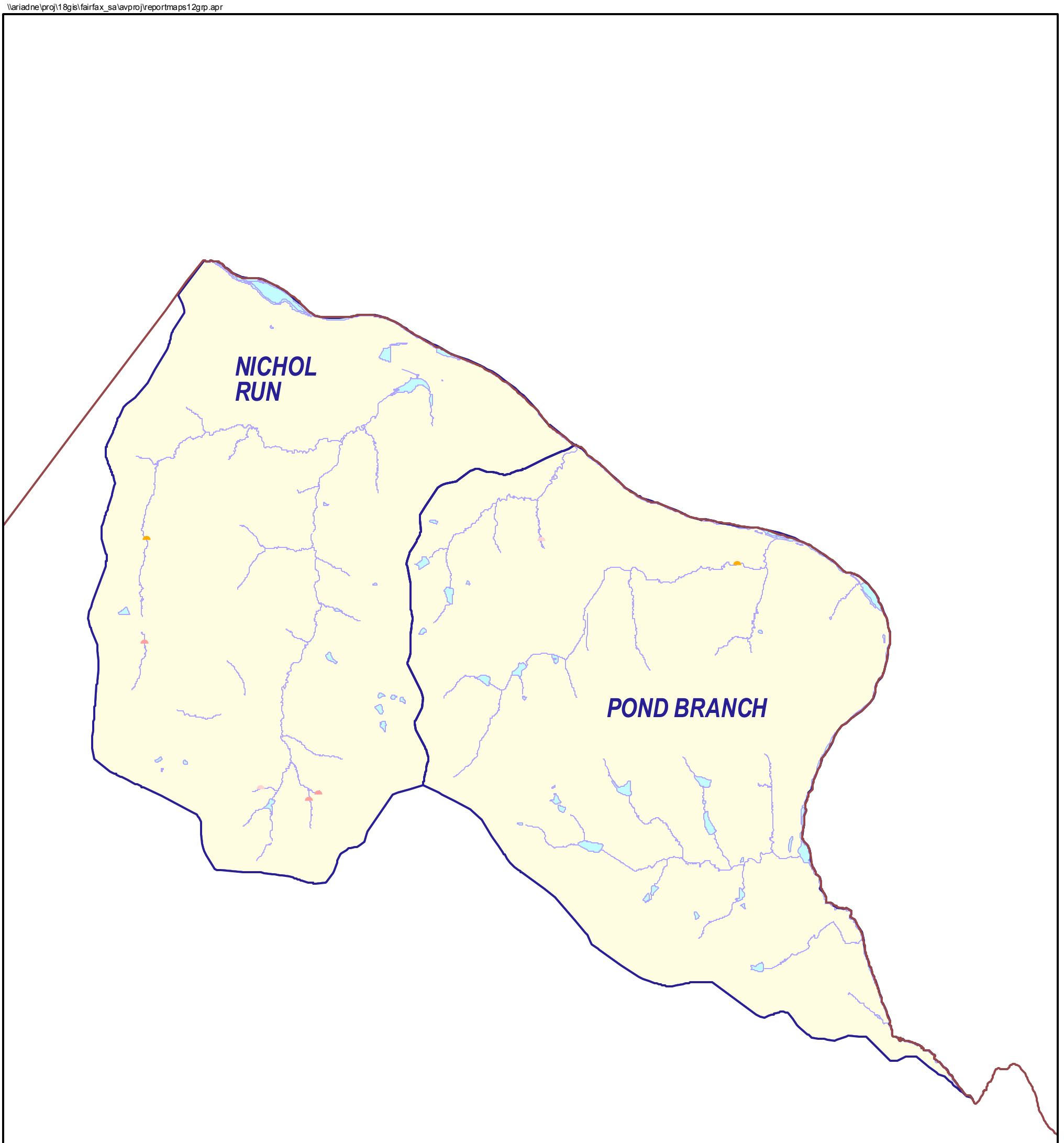

Erosion by Impact Score
1
2
3
4
5
6
7
8
9
10

Fairfax County Boundary
Lakes and Ponds
Streams
Watersheds

WATERSHED GROUP:
UPPER POTOMAC

N

0 2000 4000 6000 8000 Feet

Figure 3-12
Erosion Impacts
Upper Potomac Group
Fairfax County Stream Physical Assessment

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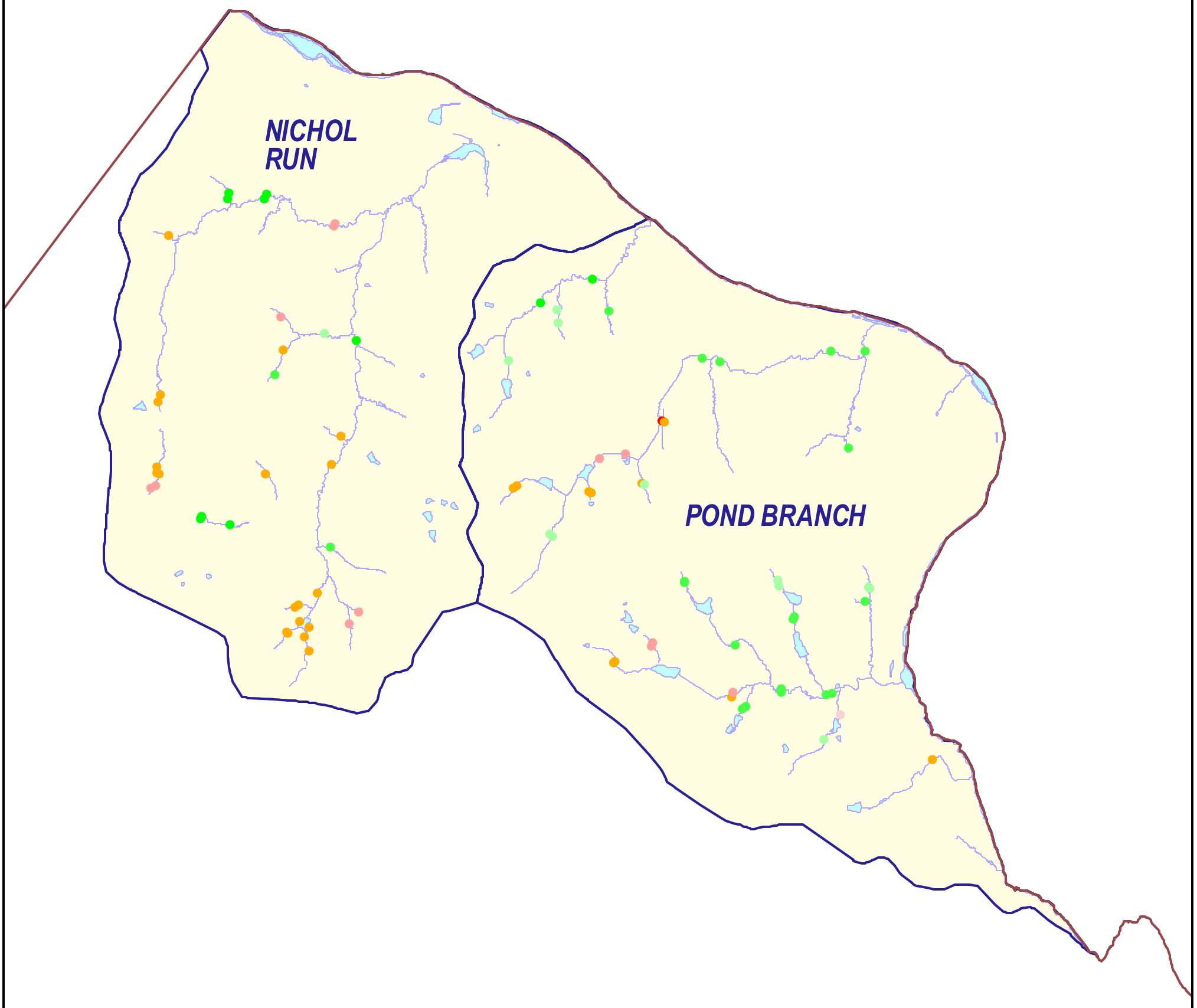

Deficient Buffer by Impact Score
- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Fairfax County Boundary
Lakes and Ponds
Streams
Watersheds

N

WATERSHED GROUP:
UPPER POTOMAC

0 2000 4000 6000 8000 Feet

Figure 3-13
Deficient Buffer Impacts
Upper Potomac Group
Fairfax County Stream Physical Assessment

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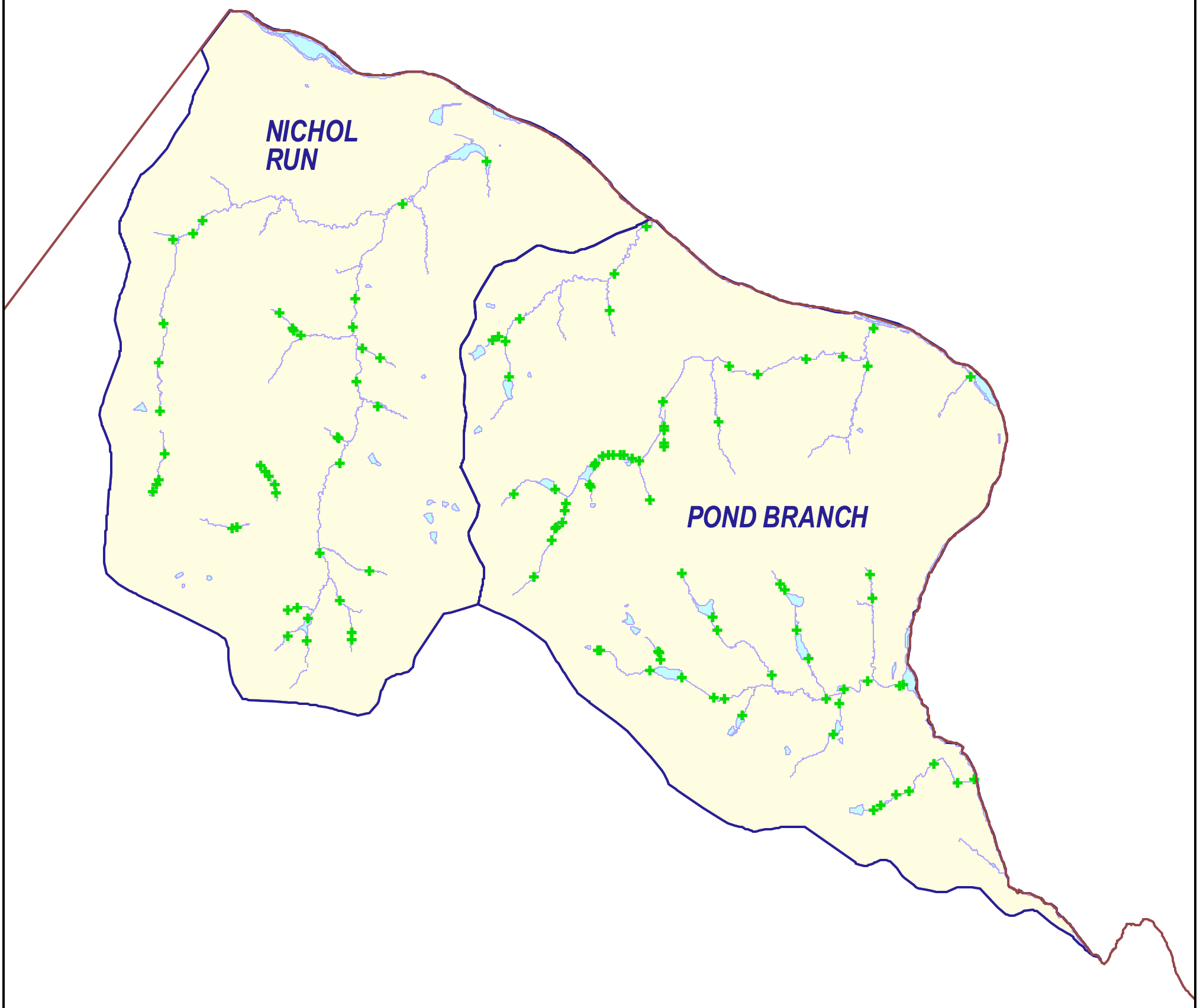

Inventory Type
+ Crossing

Fairfax County Boundary
Lakes and Ponds
Streams
Watersheds

WATERSHED GROUP:
UPPER POTOMAC

N

0 2000 4000 6000 8000 Feet

Figure 3-14
Crossings
Upper Potomac Group
Fairfax County Stream Physical Assessment

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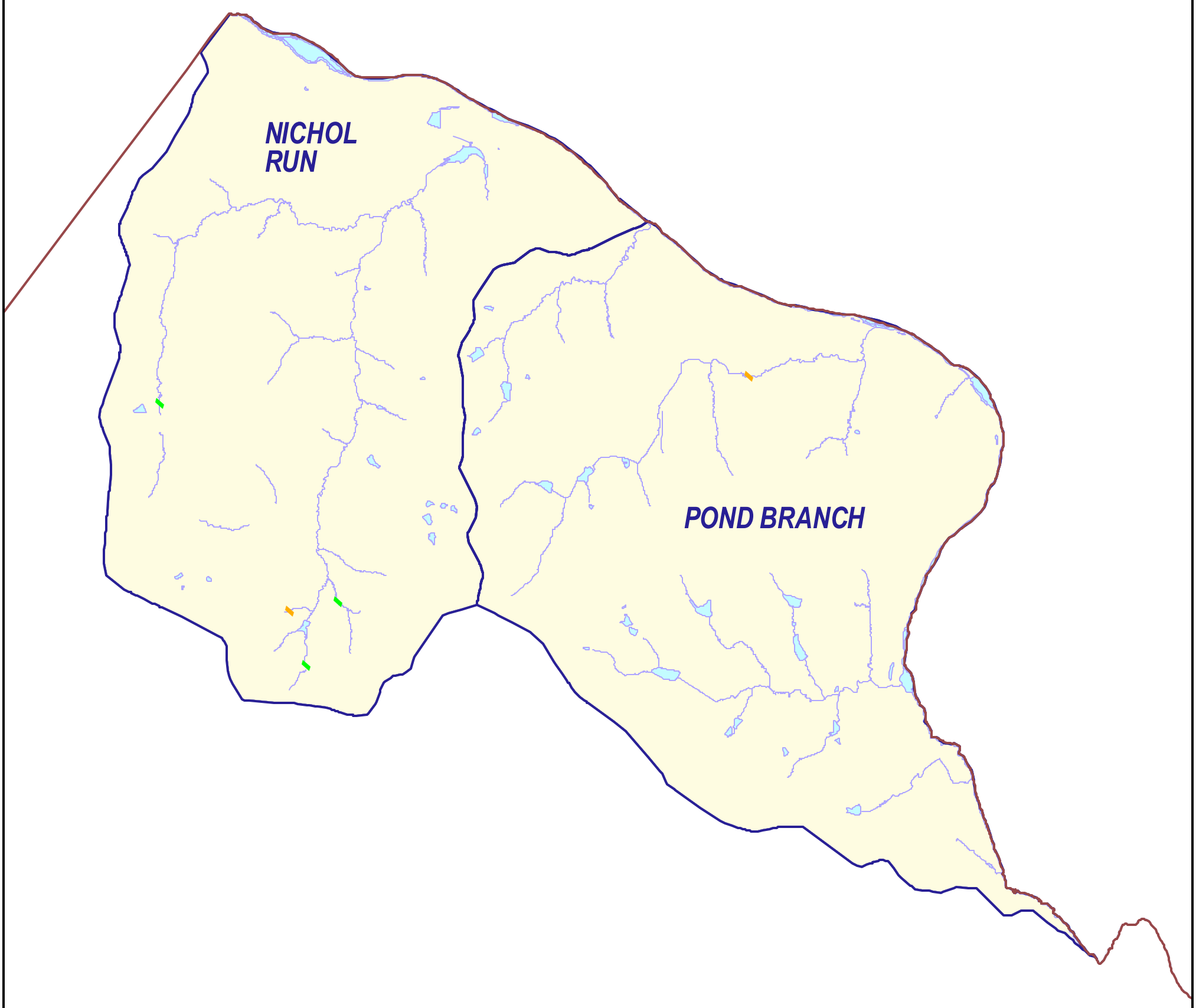

Pipe / Ditch by Impact Score

1
2
3
4
5
6
7
8
9
10

Fairfax County Boundary
Lakes and Ponds
Streams
Watersheds

WATERSHED GROUP:
UPPER POTOMAC

N

0 2000 4000 6000 8000 Feet

Figure 3-15
Pipe and Ditch Impacts
Upper Potomac Group
Fairfax County Stream Physical Assessment

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Inventory Types
- Dump
- Obstruction
- Utility

- Fairfax County Boundary
- Lakes and Ponds
- Streams
- Watersheds

WATERSHED GROUP: UPPER POTOMAC

N

0 2000 4000 6000 8000 Feet

Figure 3-16
Dumps, Obstructions, and Utilities
Upper Potomac Group
Fairfax County Stream Physical Assessment

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